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O B S E R V A T I O N S

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R H E U M A T I S M

(A C U T E & S U B - A C U T E)
IN GENERAL PRACTICE.

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OBSERVATIONS ON RHEUMATISM (ACUTE AND SUB-
ACUTE) IN GENERAL PRACTICE.

Although it is the duty of the General Practitioner to keep abreast of the times in Medical and Surgical matters, time and opportunity do not allow him to study in most cases the Pathology of disease, most important and interesting as it is.

He has to content himself with Clinical evidences of disease either at his Surgery or on his daily round.

However, there can be little doubt from our knowledge of the causation of other diseases that acute and sub-acute Rheumatism is due to a micro-organism and that the bulk of evidence goes to support the view that the micro-coccus Rheumaticus of Drs Poynton and Pains is the specific organism in acute Rheumatic affections.

PREDISPOSING CAUSES Heredity appears to play a very important part in this disease. Frequently it is not difficult to learn that one or both parents have had Rheumatic fever but not necessarily the acute fever but the "minor" symptoms such as "growing pains" - Tonsillitis - Stiff neck etc.

And this point associated with the possibility of the infective character of the virus should be sufficient to make the family Doctor warn Rheumatic parents of the dangers of the disease and the importance of such apparently trivial symptoms as "growing pains".

At times, one generation seems to avoid the affection but hands it on to the next without itself suffering from the disease.

We can in most cases be guided in our prognosis of a Rheumatic case by the freedom or otherwise of the disease in the progenitors.

A "chill" or wetting is the commonest condition attributed to the causation of Rheumatism.

In spite of the idea now held that Rheumatism is most common on dry uplands subject to large ranges of temperature, I still beg to claim that it is strongly predisposed to by damp, moist surroundings.

I once knew a family who had two members

attacked by the fever not long after removing to a low-lying house in the country.

It was accidentally discovered that a large water-way flowed under the house and the damp air from the shaft must have been drawn, by the fires, into the dwelling.

The family eventually left the house and not long afterwards a young member of the new occupant's family got Rheumatic fever.

This is not proof, but is strong evidence that dampness sufficiently lowers the vitality as to allow the ubiquitous microbe to make itself felt.

It is possible too, that the germ lingers behind in dwellings and acts as an infective agent.

In a row of workmen's houses - 10 in number - situated on the edge of a dirty sluggish stream, there were 12 cases of rheumatic fever attended in 12 months.

This was possibly due to the unhealthy moist position of the houses, plus the infective agent remaining in the dwellings after the patients had recovered - no disinfecting having been done.

Or possibly the specific micro-organism of Rheumatism like those of Erysipelas and pneumonia is what Dr. Leonard Williams calls Intra-Corporeal, for one attack does not confer immunity but rather a liability to relapse.

CLIMATE, SOIL AND WATER. - In this district Rheumatism is rife.

The town rises to an elevation of 300 feet from the sea level. The nature of the soil consists almost entirely of Lias limestone, covered with a thin layer of Clay.

The water supply is derived from Wells sunk, and headings driven into the Carboniferous limestone foundation.

The drinking water is hard, the total hardness varying from 35 to 40 degrees per 100,000, of which from 11 to 15 per 100,000 are permanent.

This district is subjected to great and rapid changes of temperature - a close damp day with a south-westerly wind is too often followed by two or three bitterly cold days with a most piercing Easterly wind blowing.

These atmospheric changes prevail mostly in March and early Spring and it is during this Season of the year that I find most cases of Rheumatism arise.

I have noticed that Rheumatic symptoms are very often associated with enlargement of one or both tonsils. Especially has this been so in children.

Whether the enlarged tonsils are symptomatic of Rheumatism or whether they are present before the Rheumatic manifestations - and produce mouth breathing which in itself lowers the resisting power of the Tonsillar tissue and so allows the rheumatic organism into their follicles and later entrance into the blood stream is a question somewhat difficult to definitely decide.

It is however found that the removal of the enlarged tonsils is not infrequently followed by improvement of the patient in all respects. This fact, coupled with the wonderful benefit derived from the administration of Soda Salicylates tends to show that the former opinion is the more correct one.

Apart from periodical enlargement of the tonsils I believe "sore throats" are very commonly of rheumatic origin.

In a large number of cases, I have noticed, more especially in children, that an attack of acute rheumatism was preceded by "sore throats". In some cases three or four attacks occurred before the rheumatic origin manifested itself. I did not notice any one special type of rheumatic throat in my cases.

In not a few - a follicular exudation occurred.

In others, a marked faucial inflammation was present.

Some cases presented one-sided or two-sided tonsillar enlargement with inflammation and darting pains.

It is perhaps noteworthy that while these throat symptoms were present vague pains in the limbs were almost constantly complained of which resembled "growing pains" very closely.

That Scarlet Fever and acute rheumatic fever are often closely related the one to the other is well known.

In several of my cases, acute rheumatism followed an attack of Scarlet fever - In some cases during the first week, while in others the rheumatic attack followed at a period extending over months. Whether the heart lesions which resulted in these cases were produced by the Scarlatina virus or the Rheumatic virus it is difficult to say.

None of my cases presented rashes although I have seen it mentioned by authorities that the onset of true rheumatic fever sometimes manifests itself by a rash not easily differentiated from a Scarlatinal rash.

The public have come so firmly and consistently

to associate Rheumatic fever with swollen, red and tender joints, - profuse - sour-smelling sweats and agonising pains that they find it almost impossible to think acute rheumatism can present itself in any milder form.

As a result, the medical man has at present often to combat parents as well as the disease.

Only recently a local practitioner was called to see a young lad aged 8 years who had complained for the past few days of just a little stiffness in muscle tendons behind the knee and who on examination was found to have his temperature raised one degree - a dilated and rapid heart and also a mitral systolic murmur at apex.

On informing the parents that their son was suffering from acute rheumatism they could not believe it - seemed inclined to argue the point and finally asked for a second opinion.

Probably the commonest symptom of rheumatism in children is "growing pains". These are found, in my opinion, much more frequently in the children of the poor than in those of the well to do. This is because the poorer children are subjected to more damp and cold and are not so well looked after as are those of the better classes.

These so called "growing pains" are dull aching, which are relieved somewhat by rest and increased by exercise.

One girl whom I attended for endocarditis told me that after a night's rest the pains disappeared only, however, to reappear later in the day after returning from school.

Fleeting in character, they are perhaps most often complained of in the muscles or fasciae of calves - sometimes over front of Tibiae. These pains do not appear to be deep-seated and are not necessarily complained of around joints.

The arms are not nearly so frequently affected as the legs - Next perhaps to these "growing pains" in frequency, is a feeling of stiffness in the muscles or fibrous tissues of extremities. This sensation of stiffness, may or may not be associated with "growing pains", but unlike the latter, is complained of in the mornings or after a fairly long rest.

A frequent position for such stiffness is behind the knees.

The practical importance of realizing that these apparently insignificant symptoms are of rheumatic origin is immense, for by doing so, many thousands of young hearts will be saved.

Until comparatively recently, Endocarditis was looked upon as purely a complication of rheumatism and undoubtedly it may still be correctly classed as such in adolescent or adult rheumatic fever, but not so with rheumatism in childhood.

For in the latter, I believe Endocarditis may be frequently the first symptom to show itself in a rheumatic fever case.

In many cases of endocarditis of undoubted rheumatic origin in children, one fails to find even on close questioning other symptoms either preceding or in conjunction with onset of Endocarditis.

And so it would be more correct to speak of rheumatic Endocarditis as a symptom and not as a complication of acute rheumatism in children.

I feel convinced that if these cases of Endocarditis were seen early the most important signs would be - rapidity and irregularity of pulse with dilated left ventricle followed by a functional murmur - "of disparative size" at apex - Later, right ventricular dilatation and still later an alteration in cardiac sounds associated with organic Endocarditis.

But such cases do not usually come to consult a medical man before the damage is irreparable - simply because the early symptoms are unfortunately too slight to command attention.

Endocarditis of childhood is even more insidious than Endocarditis of advancing years - for in the latter there are usually prodromal symptoms such as giddiness and headaches due to high blood pressure which bring the adult to the physician, while in the former there may be no danger signals of the approach of Endocarditis.

Again in rheumatic Endocarditis of adults it is very ~~rare~~ to get the heart involved without joint or other very evident affections which point to the true cause of the trouble.

Thus in childhood it is quite impossible, in many instances, to prevent Endocarditis because the heart valves may be the very first parts attacked by the rheumatic virus.

Yet for those cases that complain of sub-acute symptoms - and they are many - much can be done by the general practitioner.

An enormous burden lies on his shoulders for he can inform parents whenever opportunity affords itself, as it almost daily does, that "growing pains" are most dangerous symptoms - that stiffness in the child's muscles may be most significant - and that in most cases of slight feverishness and malaise, the

child should be confined to bed.

It is only in this way that the public will get to know the importance of muscle aches in children.

It is only in this way that our Children's Hospitals will become less full of "broken hearts" and the horrible pictures of latter-day water-logged cyanotic mortals - gasping for breath will become rarer than they are at present.



THE UNIVERSITY *of* EDINBURGH

Page order is inaccurate in original

C A S E 1.

E. H. - Aged 39 - A Labourer - was apparently suddenly seized with severe pains in both knees which soon became swollen red and tender - He had pains also along both tibiae.

The next day the pain had involved his feet - He sweated much and felt hot - Appetite was poor

After five days the pains went to shoulders and wrists.

He attributes his illness to a wetting he got while at work.

PREVIOUS HISTORY - Twenty two years ago he had an attack of Rheumatic fever and has been subject to colds ever since.

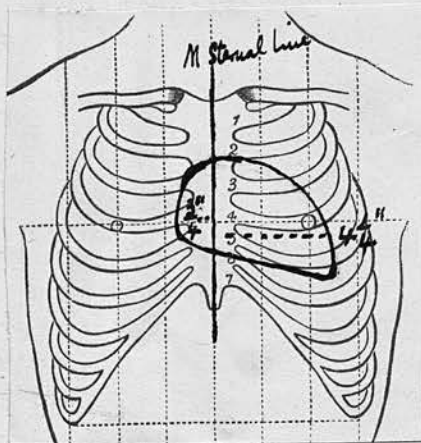
FAMILY HISTORY - Father alive and well - Mother had rheumatic fever when a girl - 14 brothers and sisters all apparently healthy.

3 Children with no rheumatic affections.

When first seen patient looked very pale and distressed - Sweated freely and complained of great tenderness and pain in most of his joints, especially in wrists and elbows which were swollen.

INSPECTION OF HEART - Impulse was seen in 5th inter-space immediately outside left nipple line.

PERCUSSION of deep Cardiac dulness (see figure)



AUSCULTATION - There was a rough pleuro-pericardial rub almost obscuring heart sounds which were faint in character - No cardiac bruits could be heard.

Pulse was 99, regular in rate and rhythm but weak - Temperature 100.6.

The only other abnormality in chest that could be discovered was a pleuritic rub in left axilla. No dullness was evident .

The case gradually improved - The pleurisy cleared up. His heart with a months rest in bed diminished in size and gave percussion dulness just within left nipple line - and no Endocarditis developed.

This case made an uneventful recovery under Salicylate treatment - In about 10 days the temperature had reached normal - For 2 or 3 nights it went up to 99 and then remained at normal - The Salicylate treatment was continued for 10 days longer but in diminished doses.

With the exception of a few vague pains which appear after a good walk has been taken, he has had no further return of symptoms.

C A S E 2.

E. J. - Aged 33 - Stoker - Said he very easily catches cold - For about a month he had pains in both feet which became swollen, red and shining -

They got better without treatment but both knees then became similarly affected - He sweated profusely and lost his appetite and generally felt ill, but 2 or 3 days rest in bed enabled him to resume work but the pains in joints would soon return and he would again be compelled to take to bed.

PREVIOUS - He has always been healthy - No "Growing pains" when a child as far as he can remember

Family History shows no history of Rheumatism.

On examination, the patient's joints were all painful, but knees were especially tender and swollen. He was very pale but was otherwise well nourished.

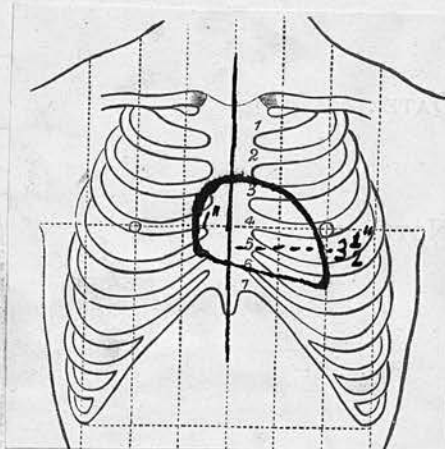
PULSE - Rate, 96 - Regular in rate and rhythm, but volume was small and pulse was easily compressible.

Temperature 101.2.

INSPECTION OF HEART - Showed impulse in 5th interspace, immediately inside left nipple line.

On Palpation - a presystolic thrill was felt.

PERCUSSION



AUSCULTATION - At Apex a rough presystolic bruit running up, to booming first sound - Second sound was faint.

At Base - Aortic sounds were faint - no murmur evident.

Pulmonary second sound was accentuated

In spite of long rest, the murmurs at apex remained, but when convalescent, the systolic apical bruit was more distinctly heard as a harsh blowing sound. The character of the presystolic murmur had not materially altered and the heart had not diminished in size.

Patient while under the Salicylate treatment once or twice complained of deafness.

Fleeting pains in limbs lingered about patient for a considerable time. They were relieved by Quinine Sulphate and Arsenic.

C A S E 3.

Mrs F. - Age 37 - Housewife.

When she was about 14 years old she had dull aching pains in both knees and also in muscles of calves - She never laid up with the pains. Twelve

months afterwards she noticed that she got short of breath on exertion - She was very pale at this time but her feet did NOT swell - Her appetite was poor and she stayed in bed a fortnight - The Doctor saying her heart was weak.

On and off she suffered from pains in limbs and joints for 5 or 6 years but never noticed that any of her joints swelled.

She married 14 years ago and after birth of first child her symptoms became distinctly worse.

She then had severe pains all over: vomited almost incessantly for a fortnight and dropsy of feet and abdomen developed.

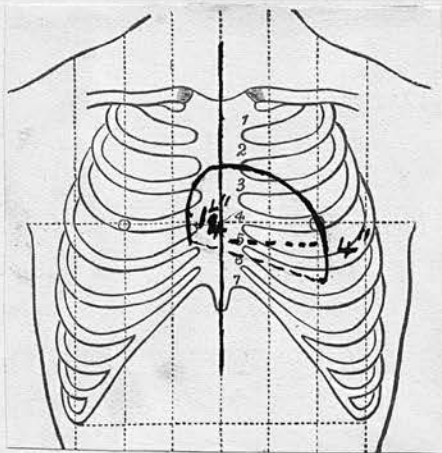
On examination, she is cyanotic - Her lower extremities are dropsical Has marked ascites - Liver is enlarged.

FAMILY HISTORY - Shows that one Sister suffered from Rheumatism.

CIRCULATION - Venous pulsation seen in neck.

No Cardiac impulse is seen - Nor can impulse be felt.

PERCUSSION.



AUSCULTATION - A presystolic bruit was made evident by making patient gently exert herself - This bruit was faint and ran up to feeble systolic bruit at apex.

At Aortic area sounds were very faint and no murmur was heard.

Pulmonary second sound was moderately exaggerated.

Pulse was irregular both in rate and rhythm and could at times be scarcely felt at wrist.

Rate 126.

Temperature 98.2.

Patient was given Digitatis M \bar{V} - Spirit Ammon: Arom 3~~4~~ t.i.d but this did not suit her as she vomited repeatedly after taking it, so she was given Parke Davis' Pilules of Digitoxin one t.i.d for 3~~4~~ days and then one a day for a week with two days rest and then repeat.

These agreed with her very well.

Heart improved - became more regular in action and the pulse slowed down. The urine which previously had been scanty and albuminous was increased in amount. The dropsy and Ascites got much less.

Later she was put on Nativilles Digitalein $\frac{1}{240}$ gr with gradual improvement sox that at end of five weeks she was allowed to get up on a Couch daily.

She is now able to do a little housework.

Last time I saw her, pulse rate had reached 80, was regular and moderately strong.

C A S E 4.

Ethel McDonald - Aged 17.

Three years ago while attending school she used to suffer from pains in left lower limb - from knee down - These pains were distinctly worse after running about all day.

In the mornings, after a night's rest, they would have disappeared, only to return later in the day.

She never has had acute rheumatic fever and no other infectious disease.

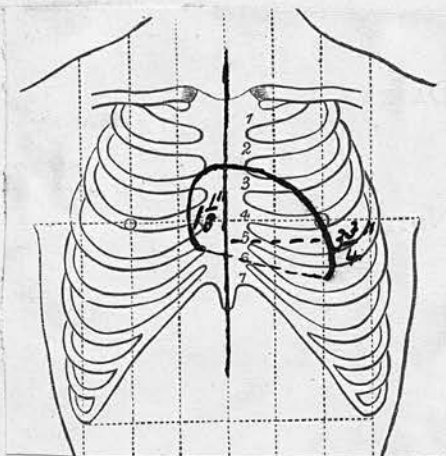
FAMILY HISTORY - Mother suffers from Rheumatism - Father healthy - Of the other members of family, 3 boys suffer from "Growing pains" - one very severely.

PRESENT CONDITION - I was called to this girl because "She could not keep any food on her Stomach".

She was a well nourished girl - Nothing abnormal was discovered in abdomen but on putting my hand over the praecordium a distinct cardiac thrill was felt - presystolic in time.

The heart beat vigorously and irregularly - the impulse being immediately outside left nipple line.

PERCUSSION



AUSCULTATION - A loud rough presystolic bruit running up to faint blowing systolic bruit was heard at apex.

Traced back into Axilla the systolic element could NOT be heard and behind at Scapular angle the presystolic murmur only was heard.

AT BASE - Both sounds were "Closed" and second pulmonary sound was markedly accentuated.

Temperature - 97.6.

Pulse was irregular and weak.

She was kept to bed for two weeks and Nativelles Orgitalin Pilules ²⁴⁰ i gr2 daily for 3 days and then one daily for 4 days.

As the heart had quieted down and there had been no recurrence of the vomiting she was allowed to get up.

I have seen her once or twice since but there has been no further cardiac symptoms complained of.

CASE 5. - Maggie N. - Aged 12.

This was a case referred by a Medical Inspector of Schools on account of Heart trouble.

PREVIOUS HEALTH - Had Diphtheria 6 years ago when Tracheotomy was performed - Scarlet Fever 3 years later and Kidneys were affected for some months afterwards.

In August 1910 she first complained of vague, indefinite pains in feet, legs and arms, during which time she stayed in bed a week.

Pulse 108 - very weak - Temperature 99.4.

PRESENT CONDITION - She complains of slight shortness of breath - giddiness - a poor appetite and vague pains especially over hip joint - Her general condition is good - No evidence of hip joint disease.

Pulse - rate 88 - low tension - regular.
Temperature - 99.2

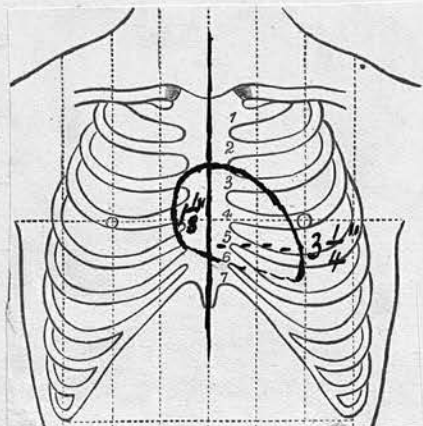
Heart ~~is~~ - Palpation - a distinct presystolic thrill is felt.

AUSCULT: - Soft Systolic mitral bruit heard over apex of heart.

No first sound but second sound plus a rumble is heard at apex.

At Base - Both aortic sounds are closed.
Second pulmonary sound is accentuated.

PERCUSSION



The girl was kept in bed for 10 days (I could not prevail on Mother to keep the child there longer) When I examined her last, the heart had not altered in size and the murmurs had not changed from those mentioned above - Child's breath is better.

C A S E VI

Alfred B. - Aged 8 years.

Father and Mother gave no history of Rheumatism.

One of the brothers had recently had dry pleurisy - There was no evidence of Phthisis in family.

For three weeks before Xmas he had pains in knees and up both thighs - then pleurisy developed - Later his left knee became exceedingly tender, red and swollen - He stayed in bed for three weeks and pains and pleurisy cleared up under Salicylate treatment.

About a fortnight later his mother noticed that he began to twitch and frequently dropped articles from his hands - He became weak in both legs and could not play with his friends - The boy became stupid-looking.

On examination - He was seen to be well developed - A mouth breather (with enlarged tonsils) Shy and nervous in manner - Showed Choreic movements - much more marked on Right side.

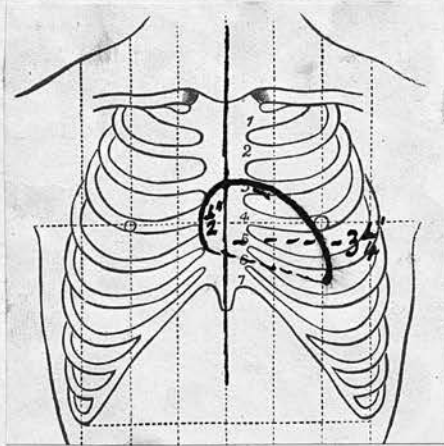
Right side of face moved less than left and was fuller - Both hand grips were weak but right much more so than left - although he was a right handed boy - Right leg was also weaker than left leg.

Small muscles of hands were ill-developed and all other muscles were soft and flabby.

Knee jerks were present - He slept badly and speech was affected - Movements practically ceased when asleep.

HEART on PERCUSSION

(see next Sheet)



AUSCULT: - A rather harsh Systolic bruit which did not occupy whole of Systole was heard at Apex - propagated ~~into~~ back and into Axilla.

Second sound was heard at apex.

At base - Aortic sounds were closed.

A pulmonary systolic murmur was present (Haemic)

Patient was treated with gr. x Sod. Salicylate
gr. xv Sod. Bicarb: Pot: Brom: viii Liq Arsen: mvi. t.i.d.
3

In ~~xxxx~~ days time the Arsenic was increased daily until he was receiving m xx t.i.d.

He soon was able to sleep better and his Choreic movements gradually became less pronounced - But the mitral Systolic murmur at base, was still audible - After 20 days treatment all movements had ceased but bruit still there - He was kept in bed another fortnight and then allowed up a little daily on a Couch.

When I saw him last the bruit had disappeared and there had been no return of the Chorea.

C A S E VII - Ralph Clifford J. - Aged 12 years.

This boy was brought to me on account of loss of appetite - pallor - falling off in weight and pains "all over" which he had had for past week.

On examination - He was a delicate looking boy thin - pale and very nervous - He stammered badly -

He complained of vague pains but could not

define the painful parts.

Temperature 101.5

Along flexor tendons of both forearms and at inferior angles of scapulae there were several subcutaneous nodules about the size of small peas - These were not visible but could easily be felt and were not tender.

The Carotids in neck beat forcibly.

On listening to his heart a harsh mitral systolic bruit at apex was audible - No murmurs in Aortic area were heard.

He was ordered home to bed.

PREVIOUS HISTORY - Mother says he was backward in talking - Had measles when 3 years old - Scarlet fever when seven years old associated with dropsy but no ear trouble.

For past 8 years has had "sore throats" periodically - Has had dull aching pains "on and off" in legs ever since he had Scarlet fever.

Has never had acute Rheumatic fever nor Chorea

FAMILY HISTORY - Mother gives a history of rheumatism - Father is quite free from it.

One brother aged 13 years had Scarlet fever at same time as patient, followed on about the sixth day by Rheumatic fever - He still gets "growing pains" in limbs but does not complain of "sore throats".

He has no heart lesion.

One of his sisters frequently suffers from "sore throats".

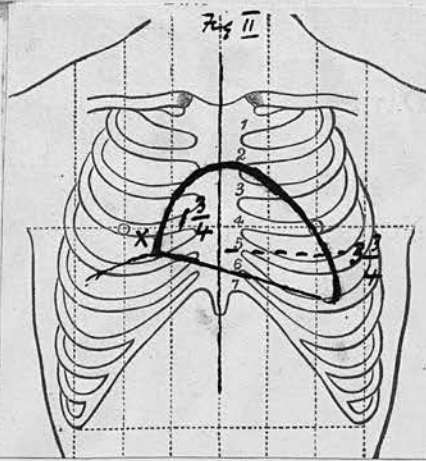
On visiting patient next day, he was anxious looking - Carotids in neck pulsated visibly - He had been very restless all night.

AUSCULT:- At apex a harsh mitral systolic bruit was heard - propagated into axilla.

At base of heart aortic sounds could not be heard until breathing was stopped when a systolic bruit was heard - The aortic closure was followed by a blowing diastolic murmur best heard at bottom of sternum.

PERCUSSION

(see next Sheet)



This boy suffered from paroxysms of "Anginal" pains which would commence over heart and travel to left shoulder and pass down left arm - Such attacks would last as long as half an hour.

Sleep was induced by gr v of Dover's Powder of Aconite m ii - 2 hourly also brought great relief - Application of Linimentum Iodi (fort) to Praecordium appeared useful in hurrying up the inflammatory exudate.

Breathing is now easy and patient is convalescing.

Father and mother alive and well.
No evidence of Rheumatism in family.

(26)

Enjoyed modearte health for 5 years.

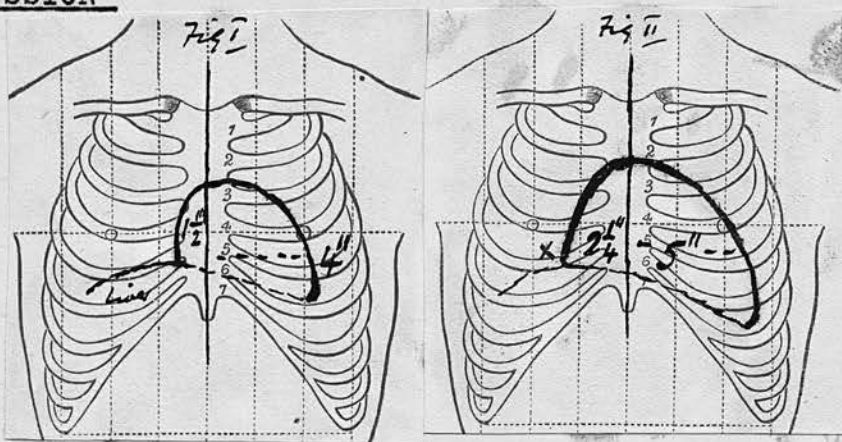
Eight weeks ago after a wetting on previous day he felt cold and complained of a tightness round the chest - He had no pains in the limbs - next day he went to work - Tightness in chest got worse and pain in limbs developed.

When first seen he was gasping for breath. Complained of acute pains in left Hypochondriac region - He was very pale and had vomited several times on previous night.

On examination - The abdominal wall was kept rigid and palpation in epigastrium and left hypochondrium could not be permitted on account of the severe pain.

Lungs
Both ~~lungs~~ were resonant and there was no evident pleurisy.
HEART - There was a diffuse impulse $\frac{3}{4}$ " outside left nipple line -

PERCUSSION



AUSCULT:

Heart sounds could not be easily made out owing to a coarse treble pericardial friction rub - loudest over the apex.

Next day no heart sounds could be heard, but a dull rub occasionally was heard to left side of sternum - On the 4th day the hypochondriac rigidity and tenderness subsided.

A week from commencement of illness pericardial extent was as Fig. 2.

Patient was unable to lie down in bed and insisted in sitting in an arm Chair - He had a short cough which troubled him incessantly and when dozing off to sleep would start up with bad dreams .

Cold packs to the pericardium greatly relieved him and sleep was induced by gr.x of Dover's Powder at night - In 10 days the pericardial effusion began to be absorbed - friction sounds reappeared over base of heart and later coarse "creakings" were evident over whole of pericardium.

Fainter, and as it were, more distant heart sounds could now be heard. At apex there was a bruit systolic in time -

At base a double bruit was present - The Aortic Cusps were heard to close and after the closure the diastolic murmur occurred.

Then examined just a month after onset of illness no evidence of pericarditis remained - The heart sounds are clearly heard and are as above depicted.

The apex beat was 1" outside left nipple line in sixth interspace -

Patient is now convalescent, but I find it most difficult to impress upon him the necessity of resting in bed until "the heart gets smaller".

C A S E 9.

The following is a case I saw repeatedly at the O.P. Department Cardiff Infirmary. It is by kind permission of Dr. Alfred Howell I am enabled to refer to it.

Tom M. - Aged 12.

Eldest of four - Father and mother and children give no history of Rheumatism - He first came under observation on December 4th 1907 -

Complained of pains in legs worse on left side - In right side of neck with a poor appetite for past 14 days - Has never had rheumatic fever -

On examination - Lymphatic and sub-maxillary glands enlarged on both sides - Right tonsil enlarged.

Heart - a localised systolic murmur at pulmonary area was audible -

Temperature was normal.

Thinking the condition to be Tuberculous he was given Syr: Ferri. Iodidi. - On April 28th 1908

he had been unable to walk for past three months owing to Chorea and still presented Choreiform movements.

HEART -, Was dilated 2" to left of nipple line - There was a soft mitral systolic with first sound heard at apex.

Was admitted to Infirmary for 10 weeks - On leaving the Institution, the heart had diminished in size but he still complained of shortness of breath on exertion.

In November 1908 - Child was not so well - He had been in bed for 14 days - Air entered his lungs poorly, especially on left side - There was dullness over left base behind - He was very short of breath.

In February 1909 - Still short of breath - and had been vomiting severely -

On July 14th 1909 - Liver was enlarged - Fluid in Abdomen - Oedema of legs and face suspicion of jugular thrombosis -

On September 26th 1909 -, Dimensions of heart in transverse nipple lines were 8½" of which two inches were to right of mid sternal line - The lower middle line and left chest is prominently raised forming a pyramid with its apex just above and to left of Chondro Xiphoid articulation - The apex of pyramid is about 3" above normal level of right nipple -

On 27th April 1910 - (photos taken) -

Dullness to inferior scapular angle behind-
HEART - soft systolic mitral with no first sound heard all over chest, back and front -

Liver not enlarged - no fluid in Abdomen and no Oedema of legs - A few Rales were heard at right base behind - Left base was dull - breath sounds distant - no exaggeration of vocal Fremitus - Lung probably compressed (by enormous heart).

August 31st 1910 - He had been very ill and dyspnoeic face looks puffy but does not pit -

April 4th 1911 - General Condition - Boy is exceedingly thin and poorly nourished - Very pale - with prominent eyes - He breathes rapidly -

On inspection - Pulsation of huge heart was seen over

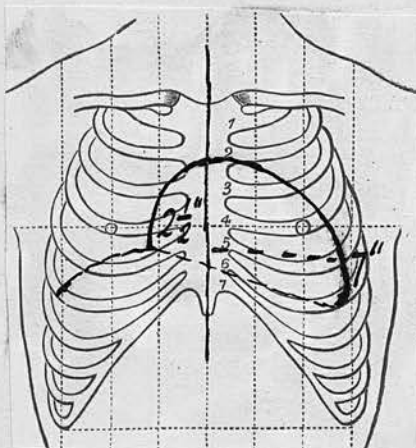
large area - Pulsation was felt in seventh interspace in mid axillary line -

AUSCUL:- Soft musical murmur heard best at apex but also heard all over praecordium into axilla and at lower angle of scapular behind - The murmur occupies whole of systole - There is no first sound and second sound is faint at apex - At pulmonary area a soft systolic and accentuated second sound heard - Over Aortic area there is just a second sound which is closed - no regurgitation -

Due to six weeks rest in bed the deep cardiac dullness on left side had diminished by 2" - ~~xxxx~~

Pulse 126 - All heart beats reach the wrist.

PERCUSSION



As can be expected, this boy is practically an invalid - He is able to walk very short distances on the level - Is not able to climb the stairs or to do anything that needs expenditure of much energy.

His mother says that his appetite is still very poor and that at times he changes colour turning very pale-

Photographs of Case 9.



The contrast of symptoms in acute and sub-acute rheumatism between adults and children is brought out plainly in my few cases.

In cases 1 & 2 in adults, the chief complaint was of pain and tenderness in joints which later became red and swollen, whereas in all my other cases, in children, with the exception of number 6 there was no definite history of swollen and red joints but rather vague pains in limbs of a fleeting nature and usually not sufficiently severe to make the sufferer take to bed.

There was however, in case 6 a definite history of articular implication.

The question of diagnosis of rheumatism in adolescence is usually easy from the combination of symptoms such as:- joint affection - sweating - fever, and lastly reaction to Salicylates.

But when one joint only is involved and there is not much elevation of temperature doubt is likely to arise, and I feel confident that many cases of gonococcal synovitis have been treated for rheumatism.

In these doubtful cases the reaction to sodium Salicylate is, I believe, a usual test.

To get a child to point out a localised painful part accurately is often very difficult, but it is very much more difficult to get exact information concerning the location of vague illdefined pains in muscles, bone, joints, or fasciae.

In children suffering from so-called "growing pains", I have handled their joints and enquired whether it is in them that the pains are felt, and the answer almost invariably has been no. I have found that these pains are most commonly myalgic or fascial in origin, or if they arise in the synovial lining of joints are undoubtedly more often referred to parts above or below the joints themselves.

It is often most difficult to be certain even which is the most tender part being palpated as in a child with rheumatic diathesis most parts are hypersensitive.

In the same way a child that has had rheumatism is usually most sensitive to alteration in climatic conditions especially damp and cold.

CASE 1 shows the obstrusive joint symptom of

the adult, and that the fact that he had rheumatic fever 22 years ago, the tendency to relapse.

It was very amenable to treatment as most cases beginning in adult life are.

The prognosis in rheumatism beginning in adult life is generally very good - contrasting with the rheumatism of childhood.

CASE 11 shows the danger of neglecting prompt treatment.

He had for about one month pains in both feet and endeavoured to follow his employment.

He developed heart symptoms and was more resistant to treatment than case 1.

CASE 111 - This case probably had rheumatic fever when 14 years old which apparently was not adequately treated with the result that she had indifferent health and damaged heart. The heart was just able to cope with its ordinary work but was unable to respond to the extra strain thrown on it by pregnancy and labour.

CASE 1V - This case well illustrates the very insidious origin of rheumatic fever in children.

The history says she never had rheumatic fever and only on close questioning could I obtain a history of "growing pains". Yet the Cardiac condition - the dilatation showed the rheumatic toxin had been most potent.

CASE V - This illustrates the association of Scarlet Fever and Rheumatic fever. Whether the Cardiac condition was due to the specific organism of the former or the latter, is unknown. - for the history of rheumatism is very vague as in last case, and consists of indefinite "growing pains".

In CASE VI we have the association of Rheumatism with Pleurisy - Chorea and Endocarditis.

There can be little doubt but that Pleurisy is frequently of pure rheumatic origin - Case 1 also illustrates this association.

CASE VII - Illustrates several points - Again the insidious origin - no special joint pains were complained of - merely loss of appetite and loss of weight.

I consider loss of weight in a child to be

particularly suggestive of rheumatic fever especially in the absence of any obvious cause for it. It has once or twice fallen to my lot to find rheumatic fever in suspected cases of Tuberculosis where the loss of weight and general delicacy has been the only discoverable symptom.

Another point of interest is the occurrence of stammering. This is in my experience not of unusual occurrence - even apart from Chorea, and I do not consider the stammering to be a choreiform movement of the laryngeal muscles but may be part of a general nervous temperament of rheumatic children.

As in case IV symptoms seem to date from an attack of Scarlet fever and the patients' brother had rheumatic fever six days after attack of Scarlet fever.

This was also a very severe case characterised by Pericarditis, great dilatation of the heart with damage to the Aortic and mitral valves with very distressing symptoms of an anginal nature - inability to sleep and great dyspnoea.

This is one of the few cases I have seen in general practice which presented fibrous nodules. They were not visible but could be felt along flexor tendons of both forearms and at inferior angles of scapulae. These nodules are said to be present in the severer cases and to be of bad prognostic significance.

This case tends to support this view.

IN CASE VII - We have a symptom which has been discussed much of late namely:- rigidity of the abdominal wall in association with acute Pericarditis.

The patient came under treatment complaining of shortness of breath with acute pain in left hypochondriac region and marked rigidity of abdominal muscles suggesting at first an abdominal condition.

It was only on careful general examination that the pericardial condition was discovered and later the rheumatic nature of the case was further shown by pain and tenderness in shoulders and knees.

The cause of the abdominal rigidity is difficult to explain unless it be a reflex act to save the inflamed heart from abdominal compression.

CASES VII and VIII - owed their severity to the

development of pericarditis . This I consider very much more serious than Endocarditis which is often recovered from entirely or may damage individual valves permanently.

But this permanent damage can in most cases be compensated for by Hypertrophy of muscle walls of heart and the mechanical difficulty overcome.

In Pericarditis on the other hand, the damage inflicted is one which cannot be adequately compensated for by hypertrophy as there is almost invariably adhesions of the layers of the pericardium produced.

This not only hampers the movements of the heart but also its growth.

CASE 1X - is also a very serious case.

Starting with no definite symptoms with an apparently sound heart at 8 years of age. Five months later the heart was found dilated and Endocarditis present - Fever apparently following Chorea.

Despite 10 weeks careful treatment at Cardiff Infirmary the symptoms persisted and twelve months later the heart was found enormously dilated - Liver enlarged - Oedema and Ascites present.

And this progressive downward course occurred without any history of rheumatic fever.

This steady deterioration I can only attribute to the occurrence of Pericardial adhesions the result of a pericarditis which gave no physical signs but whose effects so hampered the heart's action that it was unable to do its work.

I have seen other cases of a similar nature in which the symptoms were much severer than physical signs would lead one to suspect and in which postmortem evidence showed to be due to pericardial adhesions.

Another most interesting feature in this case is the marked praecordial bulging (well displayed in photographs) .

Such bulging can of course only occur in childhood when the ribs are soft and yielding

T R E A T M E N T

Preventive treatment at our present stage of knowledge consists of using a large proportion of common sense in the manner of living. Children with rheumatic diathesis should not be allowed to play in damp surroundings and should have their clothes removed as soon as possible after getting them wet.

The minor aches and pains so commonly seen in children should be watched most carefully and rest in bed should be enforced when they are complained of.

Adults who have had one attack of rheumatic fever should be given to understand that recurrence is liable to occur and that they should endeavour to keep themselves in the fittest of conditions.

Injections of Vaccines does not yet appear to be beneficial in causing immunity from the disease nor has their success been noted in the treatment of many cases of ~~acute~~ ^{Chronic Rheumatism} rheumatism. *appears to be benefited*

Good food - fresh air - warm clothes - avoidance of wettings and "Chills" and an equable climate appear to be the necessities for those predisposed to rheumatic affections.

The most important factor in the treatment of rheumatic Endocarditis is REST - both physical and mental. This may appear to be very easily obtained, but it is not so in general practice.

To request a youth or adult suffering agonising pains in almost every limb, to rest in bed, there is usually but little need, but to make a similar request to a child who feels almost well is quite another thing.

The parents might command the child to stay in bed 8 or 10 ~~days~~ - after that the young patients' wish prevails and he is allowed to get up although much against, may be the Drs' wish.

Children naturally find it very tedious to stay in bed for long periods.

I therefore endeavour to do one of two things, either get them to a Hospital where they are under strict discipline or I continue to give them small doses of a hypnotic at intervals.

I find that very small doses of opium preferably in the form of Doree's Powder given occasionally along with the other treatment soothes down the

restless child - calms the circulation and encourages sleep - From such treatment I have noticed no ill effects whatever but usually much benefit derived.

It is one of the most difficult things for a General Practitioner to impress on the parents the importance of prolonged rest.

They think that reclining in bed is too weakening.

The period of rest required must naturally be judged of by the knowledge of each individual case.

In a case of a child who complains of "growing pains" with or without fibrous nodules : with slight rise of temperature (say 99° F) I think he should be left in bed about 14 days after temperature has reached normal.

In a case where with minor evidences of rheumatism there is dilatation of heart with rapidity etc - a month should be about the period of absolute rest in bed. And the if the heart has regained its normal size gradual exercise should be allowed but the patient watched at close intervals for a return of symptoms.

Where there is dilatation plus bruits at apex, rest should be enjoined for as long as 2 or 3 months.

By this time a functional bruit would have disappeared and even an organic murmur if it does not entirely disappear will have derived immense benefit from the rest.

In passing, I may be allowed to say that sub-acute cases of rheumatism and less frequently acute cases do not tend to relapse nearly so often when a change of air is taken in the early convalescent period.

I have noticed this over and over again - A person who gets an attack of rheumatic fever - say at the sea-side, convalesces ~~xxx~~ much more rapidly at an inland town. The converse also holds good.

Next to the all important rest treatment comes the drug treatment. Sodium Salicylate appears to me to be a specific in acute rheumatic cases.

Much of its efficacy however, depends on the method of administration.

In a severe case of rheumatic fever with articular pains and fever, Salicylate of Sodium given every hour in gr. XV doses combined with gr XX of Bicarbonate of

Soda, until the pains are eased, and then less often frequently cuts short the attack - produces a slight hypnotic influence on the patient so that he is enabled to sleep - and reduces the temperature.

The fear of poisoning the patient by big doses is very remote, for the patient will early enough inform you of the buzzing noises in his ears or sometimes deafness is complained of.

I have not found, as it is stated in most text books of medicine, that Sodium Salicylate is very depressing.

It is true however, that given in massive doses for long periods, it tends to depress and makes the heart irregular.

I have found in cases where the heart is weak either from the Sodium Salicylate or other causes, that Nux Vomica is a useful adjunct.

Aspirin and Taxa I have tried in a few cases only but find no greater benefit from them than from the Sodium Salicylate with the exception that patients sometimes prefer the tabloid form to the liquid form of medicine.

It is difficult to come to any definite opinion whether the Sodium Salicylate tends to prevent Cardiac mischief in any way, but I am inclined to think it does - possibly be lessening the toxicity of the blood.

I believe it to be all important to commence with big doses as I have found that small doses takes very much longer to cure and besides, convalescence often is prolonged and associated with pains and at times even relapses.

Thus, I think, the virus becomes as it were, used to or immuned to the Sodium Salicylate given in small doses, while large doses grapple with it and overcome it before it has time to protect itself.

Much the same thing can be seen in the treatment of Chorea - Large doses of Arsenic given at outset frequently cures the disease in a short time, while small doses of the same drug may necessitate months to attain a similar result.

I have found that painful joints especially in sub-acute cases do not always respond readily to Salicylate treatment.

In these cases I have used Methyl Salicylate and Lanolin - equal parts of each to be applied

to the joints.

In other cases, flannels rung out of Soda baths and applied to the painful joints has given great relief.

Where there has been marked anamia Iron and Arsenic Jelloids have been found very beneficial.

In these cases, where after the fever is over - fleeting pains still remain, I find that Quinine given in big doses does much good.

Of the Vaccine treatment I have no experience but judging from the literature not much benefit has been derived from it yet.

I think it most important in the treatment of rheumatism that special attention should be given to the mouth and intestinal tract.

The teeth should be cleaned daily and the mouth washed out with a mild antiseptic mouth-wash frequently.

The bowels should move mildly each day, and about once a week about gr. ~~iii~~ dose of Calomel followed in five hours by a Seltitz powder should be given. The gr ~~iii~~ should not be given at once but in ~~gr~~ doses hourly up to gr ~~iii~~ so that its disinfecting action shall be enhanced.

Concerning the diet in rheumatic cases much must necessarily depend on the temperature and type of patient.

In acute cases with elevated temperature and joint affection - a light mild diet serves as well as any, varied perhaps by Sanatogen or Horlicks' Malt Food.

When normal temperature is reached, Fish: Chicken need not be withheld as the aim should be to keep up the strength of the patient and so better enable him to combat the disease without throwing excessive work on the heart and kidneys.

A rheumatic fever patients' lot can be greatly eased by attention to a few details in treatment. Thus the bath of perspiration in which he finds himself and which is so very unpleasant can be combated by sponging the patient 2 or 3 times a day. In this way, the sour-smelling sweat is removed. He should lie between blankets which absorb the perspiration and his garments should also be of flannel.

In cases presenting high temperature - much benefit is got from tepid soda-packs

Cardiac uneasiness was frequently complained of in some of my cases. I found nothing that gave greater or more rapid relief than an ice-bag applied to the praecordium. Where ice can not be obtained, cold water applications give much the same result.

Strong solution of Lin. Iodi painted over Cardiac area also was useful in giving relief and apparently in hurrying up the pericardial effusion. For the sleeplessness associated with my cases of pericarditis an opiate in the form of Dover's Powder was most beneficial or Aconite in ~~it~~ 2 hourly also appeared to ease the patient

-- S U M M A R Y. --

HEREDITY is a very important factor in Rheumatism. In most of my cases a family history of it has been obtainable.

A CLAYEY SOIL with moist atmosphere and rapid changes of temperature favours onset of rheumatism.

This district confirms the above statement.

AGE INCIDENCE - In ~~the~~ children I have had to deal with most cases between the ages of seven and fifteen years.

In adults - from between the ages of 17 and 35 years.

COMMONEST SYMPTOMS.- In adults are painful, red and swollen joints - with fever - sometimes very high, even to hyperpyrexia - profuse sour-smelling sweats.

IN SUB-ACUTE CASES - The symptoms are the same but are less pronounced.

IN ACUTE CASES IN CHILDREN - the joint symptoms play a far less important role and often with the most serious heart involvement the articular swelling is not marked.

IN CHILDREN - the rheumatic onset is commonly insidious accompanied by one or more of the following:- i.e.

Endocarditis - "Growing Pains" - Stiffness in muscles-

Torticollis - Subcutaneous (fibrous) Nodules -

Tonsillitis - Chorea - Pleurisy and Skin Lesions-

S U M M A R Y (Continued)

ACUTE PERICARDITIS - Uncomplicated by pleurisy may produce hypochondriac pain and rigidity of Abdominal Wall - Simulating very closely an abdominal Catastrophe.

The Progressive downward course of a child with valvular disease usually implies Pericardial adhesions which may give rise to no physical signs.

That prolonged rest is absolutely necessary in the treatment of cases of Cardiac implications.

That massive doses of Sodium Salicylate are required at outset of attack of Rheumatic fever.

One attack does not confer immunity - indeed there appears to be in many instances an increased liability to further attacks.